Claims

1. A method for conductively connecting first and second electrical conductors consisting of different materials, said method comprising the steps of:
   - bringing the ends of the first and second conductors into mechanical contact with each other in an overlapping position,
   - connecting the first and second conductors to each other by welding without feeding of additional welding material and
   - mechanically forming the overlapping area to achieve a smooth width transition between the first and second conductors.

2. A method according to claim 1, further comprising the step of applying an insulation sheath over said first and second conductors by an extrusion line.

3. A method according to claim 1, wherein the first and second conductors are connected to each other by ultrasonic welding and preferably using a tool having a serrated base.

4. A method according to claim 1, wherein the first and second conductors are connected to each other by ultrasonic welding, further comprising the steps of:
   - inserting said second conductor on top of said first conductor in said overlapping position between a first lateral moving anvil and a second lateral anvil,
   - moving said first anvil to press the sides of said first and/or second conductor,
   - pressing a flat top tool against the top of said second conductor,
   - using of a transducer causing said flat top tool to vibrate.

5. A method according to claim 1, wherein said first conductor is flattened at one end so as to form at least a flat top surface in which said second conductor is brought into mechanical contact.

6. A method according to claim 1, wherein, before bringing into mechanical contact, the circular section of said first conductor is transformed at one end in a section chosen substantially square or rectangular.

7. A method according to claim 1, wherein before bringing into mechanical contact, the circular section of said first conductor is transformed at one end in a section chosen substantially square, further comprising the steps of:
   - inserting said first conductor between a first lateral moving anvil and a second lateral anvil,
   - moving said first anvil to press the sides of said first conductor,
   - pressing a flat top tool against the top of said first conductor,

   such that, after said steps, said method uses a transducer causing said flat top tool to vibrate, thereby ultrasonic prewelding the first conductor.

8. A method according to claim 1, wherein, before bringing into mechanical contact, the end of the first conductor is split in an axial direction into at least two parts which are laid around the end of the second conductor.

9. A method according to claim 1, wherein, before bringing into mechanical contact, the end of the first conductor is formed with a longitudinally extending groove to receive the end of the second conductor.

10. A method according to claim 1, wherein said first and second conductors have different diameters.

11. A method according to claim 1, wherein it is applied for connecting a resistance conductor for heating cables with a copper conductor.